



ODUNHW 9RODWLW\ DQG JUDFHUWDLQW V W X O H Q W W 7KH TXHVW  
 YRODWLW\ DQG XQFHUWDLQW\ WHUODVWGR FVRW W UHPESXORL Q H Q D F W I R W W H  
 WKH HPSOR\PHQW HFK DEO XHQYHUV V I E W S D V L X G H Q W V ZRUN FDSDELWLVH  
 'XULQJ SHULRGV RI HFRQRPLF SURVWDVLRQDQ TXEXVILQHWW DQG FDU  
 UHFUXLWPHQW SODQV PD\ EH DIIHFWHG UHGXFLQJ MRE  
 RSSRUWXQLWLHV )XUWKHUPRUH GHPDQG LQ GLIIHUHQW  
 LQGXVWULHV PD\ IOXFWXDWH LQIOXHQFLQJ WKH FDUHU FKRLFHV  
 RI XQLYHUVLW\ VWXGHQWV 7R JDLQ D GHSHBIHQW FVW D D G L D Q G  
 6RFLDO \$ZDUHQHV DQG 3RUFHSHQV V W X G H Q W H P S O R \ P H Q W  
 DZDUHQHV DQG SHUFHSWLRQV LQWUHQV D Z H U H O F R Q X W W H G , Q W H  
 HPSOR\PHQW GHFLVLRQV RI XQLYHUVLWV XFRPSWU L H R P H W X G H Q W  
 VWXGHQWV PD\ H\FHVLYHO\ SULPDU\ H P S O R \ P H Q W F R X Q V H O R  
 JRYHUQPHQW VHFWRUV RU VWDWLDUHQW L Q W H U S U L W H V Z K H H L Q  
 QHJOHFWLQJ RSSRUWXQLWLHV L Q I R U P D W L R Q Q X V W L H H U H Q W S H U V  
 LUUDWLRQDOLW\ RI VXFH HPSOR\PHQW GHPDQGHU W R X G H W Q D F W X D O  
 OHDG WR HPSOR\PHQW GLILFXOW\ G H W D L O H G I H G E D F N 7 K H P D L Q S X U  
 ZDV WR JDWKHU LQIRUPDWLRQ DEF

8QLYHUVLW\ 6WXGHQWV XQGHUWDLQW ZKDW FRPSDQLHV H[SH  
 &KDOOHQJHV LQ WKH 3RVW 3DQGHPLF D U Q D E R X W V F K R R O V W U D L Q L Q J S  
 7KH VHOHFWLRQ RI LQWHUYLHZHHV  
 7KH RQJRLQJ LPDFW RI WKH &ZD\ JDV X G H Q W F P K D W L G L P H Q V L R Q D O  
 SUHVHQWHG QHZ FKDOOHQJHV W S D W W H Q H P S O R R B B Q W H F D E R X O G I S U R Y L Q  
 XQLYHUVLW\ VWXGHQWV SULPDU\ F R L P S D P D H L G M W G Q D Q G Q H [ S K A W I U R P  
 IROORZLQJ ZD\ H P S O R \ P H Q W J X L G D Q F H W H D F K H U V  
 ,PSDFW RI WKH 3DQGHPLF RQ W R M Q \* C R E D O V - R E D G D U Q M W K W V L Q W R  
 7KH JOREDO VSUHDG RI WKH &ZD\ W X D S D Q G H P L G K D W X H V D Q G F R X C  
 WULJJHUHG DQ XQSUFHGHQWHGV E R R E O V K I P S O W P F O W V L X L G Z K F H K & F  
 KDV EHHQ VKRZQ WR KDYH SURIFXODG V H V H K W G B Q G W K S H J O R E D G U V W D C  
 MRE PD\ U N W W H V V X F K D V P D V V E Y H J E D G K O M W W F O R X U G I V Q J F O D V V O H Y H  
 VXSSO\ FKDLQ @ G L Q G X G H F L R Q W H G G A R B C F R Q W M B W H Z V W F O X G M B U X Q G H U  
 FRQWULEXWHG WR ULVLQJ > J O R E F R P S D Q H P S O R M F R E Q V G H P D Q G W I R U J U  
 SODFLQJ JUHDWHU FRPSHWLWLYH P S S U R H P M X U H V L Q V X D W L Y R O W L W Q G L V  
 VWXGHQWV H P S O R \ P H Q W J X L G D Q F H S R O L F L H V D Q

\$SSOLFDFWLRQ RI ,QIRUPDWLRQHQHQBFHQRTXRIJAWLRQV FHDQGH LQ GHSWK  
 SDQGHPLF UHPRWOLZRHUNHDFUGLWPIROWDWDRIQ ZDV FROOHFWHG  
 EHFRPH PRUH SUHYDOHQW GHPDQLQJ QHZ VNLOOV IURP  
 XQLYHUVLW\ VWXGHQWV LQ WHUPV RI LQIRUPDWLRQ W H F R O R J I  
 DSSOLFDFWLRQV 4 X D O L W D W L Y H \$ Q D O \ V L V

,Q VXPPDU\ WKH HPSOR\PHQW 7 F K W R R R H R X H W O I D F G O E I H W K H L Q W H I  
 XQLYHUVLW\ VWXGHQWV LQ WKH D S D W W S D Q G H M F R E W D Z H U H P R W H G 4  
 FRPSOH\ DQG V H W H Q H W G H F I P S O M W D Q W D L R Q R I X B O L W D W M L Y H D G E D W D L Q Q  
 DGGLWLRQDO PHDVXUHV IRU UHV R O W L E Q W R X Q F R Y H U S D W W H U Q V D C  
 UHYHDO WKH URRV FDXHV RI I  
 FDWHJRUL]DWLRQV F R I E W Q W L R Q G R I O W K  
 WR D GHHS XQGHUWDDQLQJ RI WKH

5HVHDFK OHWKRGV

7R FRQGXFW DQ LQ GHSWK VWXGHQWV H P S O R \ P H Q W G L O H P P D V  
 GLOHPPDV RI FROOHJH VWXGHQWV F R Q O W K H R Q V V X S D Q G H P L F Y H U D Q D O  
 WKLV UHVHDFK HPSOR\HG YDULXQLW\ W K R E V G D V F O Z G W K J T X D Q W L  
 TXHVWLRQQDLUHV LQWHUYLHZV F R Q S T X K H Q W D W L Y H V H D D F K U H V X O W V  
 7KH LQWHUYLHZ DQG TXHVWLRQ  
 FDWHJRUL]HG DQG FRGHG IRU VXE  
 FDWHJRUL]LQJ DQG FRGLQJ WKH GD

4XHVWLRQQDLUH 6XUYH\

7KH UHVHDFK EHJDQ ZLWK D T X H V W L R Q Q D L U H V X Y H W K H E R Q Q H F W  
 VXEMHFWV ZHUH VWXGHQWV IURP F H W Z H F R G L I H U F R O O S H F H W R I L Q I F  
 ORFDO XQLYHUVLW\ LQ &KLQD L O F X G H S Y V W X G H W W D W L Y H D O B O \ V  
 IURP WR 7KH FROOHJH D Q G R I H U V J L L Y H W K H F R G H G G D W D L  
 XQGHUJUDGXDWL SURJUDPV ZLWK W H H Q G V D Q G H I W U D F W L Q J L P S R U W  
 RI TXHVWLRQQDLUH ZHUH F R O O H F W H G V W X G H Q W V \$ W R W D O  
 UHVSQRVHV DQG LQYDOLG PDNLQJ IRU D U H V S R Q V H  
 YDOLGLW\ UDWHQ R K H Y D O L G U L X H W W L R R Q Q D L U H V  
 LQFOXGHG IURP ORZHU JUDGH VWXGHQWV DQG IURP

5HVHDFK )LQGLQJV

6RFLDO &RJQLWLRQ

-RE VHHNLQJ \$ELOLWLHV

\$FFRUGLQJ WR VXUYH\ UHVXOWV  
LGHQWLILHG LQ VWXGHQWV MRE  
VWXGHQWV EHOLHYH WKDW HPSOR  
UHODWLYHO\ OLPLWHG UHO\LQJ  
ZHEVLWHV JRYHUQPHQW HPSOR  
MRE IDLUV +RZHYHU RQ FDPSXV  
UHFUXLWPHQW VHVVLRQV DQG  
WKH SUHIHUHG FKDQQHOV IRU  
LQGLFDWHV D ODFNLQJ PRVWO\  
LQIRUPDWLRQ UHO\LQJ PRVWO\  
ODFNLQJ DZDUHQHV RI HPHUJLQJ  
OHVV WKDQ RI VWXGHQWV DFW  
LQIRUPDWLRQ DQG LQGXFWDQW  
VWUXJJOH WR DQVZHU UHOHYDQW  
ODFNLQJ D GHHSRKHU

6WXGHQWV VKRZ GHILFLHQFLHV LQ  
XQFOHDU VHOI SRVLWLRQLQJ DQG  
ZDJHV 7KHVH LQFRUHFHW VRFLDO  
LQGLFDWHV DOORFV RYXPHQW  
SURIHVVRU\ VDELOLWLHV  
MRE VHHNLQJ VDELOLWLHV  
HPSORPHQW GHO\IRUPDWLRQ  
PHQW LQGLFDWHV UHFUXLWPHQW  
MRE IDLUV VSHFLDO  
UHFUXLWPHQW VHVVLRQV DQG  
WKH SUHIHUHG FKDQQHOV IRU  
LQGLFDWHV D ODFNLQJ PRVWO\  
LQIRUPDWLRQ UHO\LQJ PRVWO\  
ODFNLQJ DZDUHQHV RI HPHUJLQJ  
OHVV WKDQ RI VWXGHQWV DFW  
LQIRUPDWLRQ DQG LQGXFWDQW  
VWUXJJOH WR DQVZHU UHOHYDQW  
ODFNLQJ D GHHSRKHU

:RUN &DSDELWLHV

5HJDUGLQJ WKH UHVRQV IRU  
ILHOG RI VWXG\ SRVW JUDGXDWLRQ  
DWWULEXWH LW WR OLPLWHG  
DQG D ODFN RI ZRUN H  
JHQHUDO IHOLQJ DPRQJ  
DQG XQTXDOLILHG IRU MRE  
\$GGLWLRQDO\ RI VWXGHQWV  
XQGHUVDQGLQJ RI FRUSRUDWH  
DIIHFWLQJ HPSORPHQW  
VWXGHQWV DUH LQDGHTXDWHO\  
PHHW FRUSRUDWH GHPDQGV  
GLIILFXOWLHV

DVSHFWV RI WKH HPSORPHQW  
VWXGHQWV LQ WKH SRVW SDQGHPLF  
HPSORPHQW HPSORPHQW  
HPSORPHQW FKDQQHOV  
DQG IRU WDOHQW E\ FRPSDQLHV  
RU VNLQV 7KLW KLJKOLJKWV D  
5HJDUGLQJ WKH UHVRQV IRU  
ILHOG RI VWXG\ SRVW JUDGXDWLRQ  
DWWULEXWH LW WR OLPLWHG  
DQG D ODFN RI ZRUN H  
JHQHUDO IHOLQJ DPRQJ  
DQG XQTXDOLILHG IRU MRE  
\$GGLWLRQDO\ RI VWXGHQWV  
XQGHUVDQGLQJ RI FRUSRUDWH  
DIIHFWLQJ HPSORPHQW  
VWXGHQWV DUH LQDGHTXDWHO\  
PHHW FRUSRUDWH GHPDQGV  
GLIILFXOWLHV

-RE VHHNLQJ &RQGLWLRQV

5HJDUGLQJ SUHIHUHG ZRUN  
H\SHFDWLRQV RI WKH  
PRQWKO\ VDODU\ EHWZHHQ  
+RZHYHU EDVHG RQ KLVWRULFD  
JUDGXDWLQJ HPSORPHQW WKH  
50% ZLWK DFWLQJ VDODU\ 10%  
IRU RI FDVHV D VLJQLILFD  
H\SHFDWLRQV \$GGLWLRQDO\  
ZRUN ZLWKLQ WKHLU SURYLQFH  
ZRUNLQJ LQ HFRPSHODUHQW  
FHUWDLQ OLPLWDWLRQV LQ WKH  
SRWHQWLDOLILHG HPSORPHQW

WKHLU MRE VHHNLQJ DELOLWLHV  
SURYLGH PRUH FDUHHU JXLGDQFH  
VWXGHQWV WROG DFWLQJ SDUWLFLSD  
WROG DFWLQJ H\SHFW D  
5HJDUGLQJ WKH UHVRQV IRU  
ILHOG RI VWXG\ SRVW JUDGXDWLRQ  
DWWULEXWH LW WR OLPLWHG  
DQG D ODFN RI ZRUN H  
JHQHUDO IHOLQJ DPRQJ  
DQG XQTXDOLILHG IRU MRE  
\$GGLWLRQDO\ RI VWXGHQWV  
XQGHUVDQGLQJ RI FRUSRUDWH  
DIIHFWLQJ HPSORPHQW  
VWXGHQWV DUH LQDGHTXDWHO\  
PHHW FRUSRUDWH GHPDQGV  
GLIILFXOWLHV

3URIHVVLQRQDO 4XDOLWLHV

,QWHUYLHZV ZLWK FRPSDQLHV  
WHDFKHUV DQGHVHVRXHV  
SURIHVVLQRQDO TXDOLWLHV  
FHQWHUHG SHUHVWLQJ  
UHVSRQVLELQJ GLVHVSHFW  
FUHGLELQJ 7KHVH LVVXH  
KLUH IUHVK JUDGXDWLQJ  
IRU WUDLQLQJ 7KLW SXW  
FRPSHWLWLYH MRE PDUNHW

6WUHQJWKHQ 3URIHVVLQRQDO 4XDOL  
HPSORPHQW VHHNLQJ  
VWXGHQWV WROG DFWLQJ  
SURIHVVRU\ VDELOLWLHV  
MRE VHHNLQJ VDELOLWLHV  
HPSORPHQW GHO\IRUPDWLRQ  
PHQW LQGLFDWHV UHFUXLWPHQW  
MRE IDLUV VSHFLDO  
UHFUXLWPHQW VHVVLRQV DQG  
WKH SUHIHUHG FKDQQHOV IRU  
LQGLFDWHV D ODFNLQJ PRVWO\  
LQIRUPDWLRQ UHO\LQJ PRVWO\  
ODFNLQJ DZDUHQHV RI HPHUJLQJ  
OHVV WKDQ RI VWXGHQWV DFW  
LQIRUPDWLRQ DQG LQGXFWDQW  
VWUXJJOH WR DQVZHU UHOHYDQW  
ODFNLQJ D GHHSRKHU

FRUUHFV FDUHHU FRQFHSWV DQG ROLFLV G HPLVXWV (K U)XWDXOGLQHVHDU  
 DQG ELDVHV DIIHFWLQJ WKHLU FLVPSHUFV HFLVLRQJHQPHQW SROLFLHV  
 (QFRXUDJH \$FWLYH (PSOR\PHQW P \$ORRRIQW DQGV VRFVZHWKH HIIHFWLY  
 VKRXOG HQFRXUDJH VWXGHQWV SRVSRHNV HPSORVPHQW VLIURVWLDSGRYH  
 WKHQ FKRRVH WKH ULJKW GHYHORSPHQW ROLPHQW ERQFREDOVHGH RWXGH  
 SHUVRQDO FLUFVLPWDSDFHWJUDXGDDQWHVWQDOLLRQDO &RPSDULVRQ ,QW  
 VKRXOG QRW EH D PHDQV WR DWRXGLHP \$ORRPHQW FERQVDFWHG WRH  
 FRQWLQXDWLRQ RI OHDUQLQJ DQG HUBHFORISQHWKH DPHSHOR\PHQW  
 HPSOR\PHQW VWXGHQWV LQ GLIIHUHQW FRXQWU  
 6WUHQJWKHQ 6FKRRO (QWHUSUOHMVSRVSHURPWWKRP 6FKRROV  
 VKRXOG HVWDEOLVK PRUH VFKRROV FROVHOSVLRQ FROVSKRUXJKLWQHUH  
 SURMHFWV SURYLGLQJ VWXGHQWV ZLWKG\PRWKH USLVDFWLVFRDQ WKH  
 RSSRUWXQLWLHV DQG MRE WUDFROOHJHVRWZHWQWV LQGDVMSWRV S  
 ZRUNSODFH GHPDQGV VLJQLILFDQFH )XWXUH XWVHHDUFLK QH  
 ,Q FRQFOXVLRQ DGGUHVVLQJ DQG HPSORVPHQW WHFKDFROHQHWWXG\  
 RI FROOHJH VWXGHQWV LQ WKH SRVSRVDOQGRLVXUJH VVHLTRQVHVRDVR  
 MRLQW HIIRUW IURP VFKRROV GVRPHQWV RDEBOVMXGHVWVGHQWV  
 &RPSUHKHQVLYH PHDVXUHV DUH QHHGHG WR HQKDQFH  
 VWXGHQWV HPSOR\DELOLW\ DQG DGDSDWDELOLW\ FUHDWLQJ PRUH  
 HPSOR\PHQW RSSRUWXQLWLHV 5HIIHQHVFHV

5HVHDUFK /LPLWDWLRQV DQG )XWXUH FROOHJH 6WXGHQWV (PSOR\PHQW  
 3URVSHFWV &RXQWHUPHDVXUHV &KLQD 6RFLD

'HVSLWH WKH LQ GHSWK VWXG\ RI WKH HPSORVPHQW SKRPPHQRJ 5H  
 RI FROOHJH VWXGHQWV LQ WKH SRVSRVDOQHPLFOHHPDDVQDQW &DUHH  
 SURSRVDO RI D VHULHV RI FRXQWHUPHDVXUHV WKH WZLWV DQGFVWLRQ 5  
 VRPH OLPLWDWLRQV LQ WKLV UHVHDUFK WKDW QHHG WR EH  
 DGGUHVHG LQ DQWZRUJNVWKHOLPLWVWLRQV DQG KDR /L (PSOR\PHQW  
 IXWXUH SURVSHFWV HVDKLMROORZV 3ROLF\ 6XJJHVWLRQV IRU &ROOHJH  
 &29,' 3DQGHPLF &KLQD +LJKHU

5HVHDUFK /LPLWDWLRQV 5HVHDUFK

6DPSON /LPLWDWLRQV 7KH VDPSON /LX :HL =KDOJ :HQ 5HVHDUFK RQ  
 FRPHV IURP VWXGHQWV RI D VHFRQGDUY\PSORVPHQW QLOHPPDQ (GXF  
 XQLYHUVLW\ VR LW FDQQRW UHSUHVHDUFK WKH HPSOR\PHQW  
 VLWXDWLRQ RI DOO FROOHJH VWXGHQWV )XWXUH UHVHDUFK FRXOG  
 H\SDQG WKH VDPSON UDQJH WR LQFOXGH VWXGHQWV GURP 5HVH  
 GLIIHUHQW PDMRUV DQG LQVWLWXWV HPSORVPHQW FRPHVWZLWV &RO  
 GDWD (PSOR\PHQW &RQFHSWV DQG (PSORVPHQW  
 (XEDWLRQDOGLHQH 5HVHDUFK

7LPH /LPLWDWLRQV 7KH GDWD FROOHJH SHULRG RI WKLV  
 VWXG\ LV OLPLWHG PDNLQJ LW GLIIRXOWRQFDSWQH OROXWVH  
 HPSOR\PHQW WUHQGV \$V WKH MRE (PSORVPHQW) FROOHJH DQG 9RFDV  
 WLPH ORQJHU WHUP VWXGLHV DUH &XFWLWVWLRQ RI &ROOHJH 6WX  
 'DWD 6RXUFHV 7KLV VWXG\ UHGHVQVLDWLRQ RQ

TXHVWLRQQDLUH VXUYH\ DQG LQVWLWXWV DQGHUZRQFK DKH LPSDF  
 VXEMHFW WR VHOI UHSRUWLQJ DQG VVHFWLYPSORVPHQW )XWXUH  
 VWXGLHV PLJKW FRQVLGHU XVLQJ PRUH REMHFVLYH GDWD VRXUFHV  
 VXFK DV RIILFLDO HPSOR\PHQW VWDWLVWLVV

)XWXUH 3URVSHFWV (VWLPDWHV DQG \$QDO\LVV

,QWHUGLVFLSOLQDU\ 5HVHDUFK )XWXUH %DUWLN \$ %HUWUDQG 0 &XOO  
 DQ LQWHUGLVFLSOLQDU\ DSSURDFK 629 FRPELOLQJ 6WDPYPS DERS W 7KI  
 IURP HFRQRPLFV VRFLRORJ\ SV\FKRQJ DQGLQJ 6RZV%VJGHVV 2X  
 WR H\SORUH WKH URRV FDXVHV DQG VVWLRQV RI FROOHJH  
 VWXGHQWV HPSOR\PHQW GLOHPPDV PRUH GHHSO\

'DWD \$QDO\LVV 7RROV :LWK WKH DQGHVSRVPHQW ELJ \*ROGV\PLG  
 GDWD DQG DUWLILFLDO LQWHOOLJHQVWV 3KQOLSVWXUH 7  
 UHVHDUFK FRXOG PDNH PRUH XVH RQ DQWVWLVV RI RROGVHPLF 3  
 H\SORUH SRWHQWLDU UXOHV DQG WUHQV LQ WKH MRE PDUNHW

/L <DQ :DQJ /LKXD 5HVHDFK RQ WKH ,PSDFW RI  
&29,' RQ &ROOHJH 6WXGHQWV (PSOR\PHQW DQG  
&RXQWHUPHDVXUHV &KLQD +LJKHU (GXFDWLRQ 5HVHDFK

=KDR +RQJZHL =KDQJ ;LDROHL 5HVHDFK RQ &ROOHJH  
6WXGHQWV (PSOR\PHQW 'LOHPPDV DQG  
&RXQWHUPHDVXUHV XQGHU &29,' &KLQD <RXWK  
6WXG\