

(QYLURQPHQWDO +HDOWK (GXFDWLRQ IRU 7HD
IURP D 3LORW 6WXG\ \$GGUHVVLQJ &KHPLFDO 8
0DQDJPHQW LQ +RPHV

\$OHVLD)HUJXOIRDOV .DYRSRIBWW 8QHPLHUK +D4UHQD 5HEBQGD =R4JKDQ/D F

'HSUDUWPHQW RI 2FFXSDWLRQDO DQG (QYLURQPHQWDO +HDOWK)D\ : %RR]PDQ &ROOHJH RI 3XEOLF +HD

'HSUDUWPHQW RI 8UEDQ \$IIDLUV &ROOHJH RI 3URIHVVLQDO 6WXGLHV 8QLYHUVLW\ RI 1HYDGD /DV 9HJD

6FLHQFH 7HFKQRORJ\ (QJLQHHULQJ DQG 0DWKHPDWLFV 67(0 &HQWHU &ROOHJH RI (GXFDWLRQ /LWWC

'HSUDUWPHQW RI %LDRVWDWLWLFV)D\ : %RR]PDQ &ROOHJH RI 3XEOLF +HDOWK /LWWOH 5RFN \$5 86\$

&RUUHVSRODGULQDU \$OHVLD)HUJXVRQ 'HSUDUWPHQW RI 2FFXSDWLRQDO DQG (QYLURQPHQWDO +HDOWK 6

\$UNDQVDV IRU OHGLFDO 6FLHQFHV 8\$06 /LWWOH 5RFN H\$5 JXVRQ7#XODPV HGX (PDLO

5HF GDWH 2FW\$FF GDWH 1RY 3XE GDWH 1RY

&RS\ULJKW)HUJXVRQ \$ HW DO 7KLV LV DQ RSHQ DFFHVV DUWLFOH GLVWULEXWHG XQGHU WKH WHUPV I XVH GLVWULEXWLRQ DQG UHSURGXFWLRQ LQ DQ\ PHGLXP SURYLGHG WKH RULJLQDO DXWKRU DQG VRXU

\$EVWUDFW

6FLH QNFHHD F KUHRUV PXOWL SOH . VFKRR O V L H NLQGHUJDUWHQ KLJK VFKRR O ZH
DGGUHVVLQJ WKH NH\ WRSLFV RI LQWHJUDWHG SHVW PDQDJHPHQW SUDFWLFHV D
SURYLGHG WR LQWURGXFH WHDFKHUV WR WKHVH HVVHQWLDO DVSHFWV RI SURF
DVVRFLDWHG DGYHUVH KH DOWK RXWFRPHV , QGR RU H[SRVXUHV DUH RI SDUWLFXO
ZKR VSHQG WKH PDMRULW\ RI WKHLU WLPH DW KRPH (DUO\ FKLOGKRRG HGXFDWL
KXP DQV SOD\ LQ VKDSLQJ WKH KH DOWK RI WKHLU KRPH LV VHHQ DV LPSRUWDQW I
FRPPXQLW\ KH DOWK DFWLRQV , QQRYDWLYHO\ WKH WUDLQLQJ XVHG QHZHU IRUPD
/6 WR HQJDJH DQG H[FLWH WHDFKHUV RQ WKHVH HQYLURQPHQWDO KH DOWK WRS
KH DOWK NQRZOHGJH RI WKRVH WKLUW\ ILYH WHDFKHUV WKURXJK SUH DQG SRVW

LQVWUXFWLRQ RQ 'D\ DQG , QWHJUDW 7HDFKHUV WUDLQLQJ DQG HWWDBK B E) VDVF RY
 UHFHLYHG PLQXWHV RI VSHFLILF LQVSWH B DWHRQ WDH WHDRKSISUW RMMIF VDVF RY
 XVLQJ /LEHUDWLQJ 6WUXFWXUHV /6 ZRBM HFWHLGY HU HRSI HWWH GOW DNLQW RJK, RDXW XGK
 WZR GD\ WUDLQLQJ WR GLVFXVV WRSLFRB UH\ V RD QSU M R B Q QWDI W IPDQ Q V TDRQ FHW SWEU
 7HDFKHUV ZHUH JLYHQ DQ RYHUQLJKW PDDWHLU QDQW V XRFQ 'D\ V XRSR RWWG YHWR B WHU
 /LEHUDWLQJ 6WUXFWXUHVd EURFKXUHR QYVWKLHWW RSKLH V IREHILQWHLQJD B WGI XSFHWWKU IPD
 ZHEVLWH DQG SUHVHQW WKH QH[W G DQG QKHZKOWKWKRP HWK RZKJHKWH ZRQFOOG GEHG
 XVHIXO IRUPDWV WR DGDSW WR .
 WHDFKLQJ HQYLURQPHQWDO KHDOWK F30HDAWV & RRQPAWU RQHQG B E) V WHLUF LQJH B QIGHW \g
 WWRKSHL F\ R P N\ F\ K @ V f\ WKLH/QHF H RYHDPH B RLUQ WKR
 'LVSOD\ LWHPV UHOHYDQW WR WKH WUDLQJ RQ ERWK GD\ V RI WUDLQLQJ \$ VDPSOH RI
 LQ NLWV IRU WKH WHDFKHU WR WDNH W VWXGHQWV 7KH WHDFKHU NLWV ZHUH RU
 D YDULHW\ RI VDIHU FOHDQLQJ SURGXFW
 %DQHWRJHQ SHUR[LGH DQG LWHPV FRQVLGH
 LQWHJUDWHG SHVW PDQDJHPHQW LQ WKH
 IRU SOXJJLQJ KROHV GXVW PLWH FRYHUV
 FORWKV IRU ZLSLQJ IORRUW 7R DFFRPSE
 SURYLGHG ZLWK D OLVW RI SRVVLEOH XVH
 DURXQG WKH KRPH LQFOXGLQJ PL[LQJ TX
 ZDVKLQJ FORWKHV 7KH GLVSOD\ LWHPV
 8PRNH\ WHPV DQG IRU H[DPSON LQFOXG
 +HDWLQJ 9HQWLQDWRQ DQG \$LU & RQG
 VPRNH DODUPV FDUERQ PRQR[LGH PRQLWF
 PDLQWDLQLQJ D KHDOWK\ DQG VDIH KRPH
 RI NHSLQJ D KHDOWK\ KRPH
 6WDWLWVLF, DO6PIHWKRGV WKHUH ZHUH
 30&5 LQWR 6VNLHQDH SURILFLHQF\g TXHVVLRQV EDVH
 WKHLU VNLOO OHYHO XVLQJ WKH FDWHJ
 IRU
 8VH RI D /6

'D\ 7LPH	'D\	'D\
	%UHDNIDVW & KHF	N%UHDNIDVW & KHF
DP	3UH 6XUYH\ , QWUR3GLHFWHLQW\ WLRQV *UDQW 'HVFULSWL\ QWLJQPHQW	
DP	/LEHUDWLQJ 6WUXFQWVHJUDWHG 0DQDJHPHQW	
DP	6FLHQFH & XUULFXOXPV	
DP	DPUHDN	%UHDN
DP	3UDFWLFDO \$SSO\URDW\SLRQRMHIEQW 6FLHQFH 6FLHQFH 3URMHFWV	
DP	*URXS 3URMHFW	8+HD B W\ B L\ B U +RPHV
SP	/XQFK	/XQFK
SP	&KHPLFDO 8VH 5H GOFMMUBQWLQJ &XUULFXOXP DQG 3URMHFWV	
SP		8VLQJ /6 &RPPXQLFDWLQJ
SP	*URXS 3URMHFW	8*VHRS BURMHFW
SP	&ORVLQJ \$VVLJQPHQW	VWQRFMQLRQRVW 6 8S

7DEOH HDFKHUV WUDLQLQJ DJHQGD

7UDLQLQJ PDWHULDOV

3RZHUS/OLQHMRVZHU3RLQW SUHVHQWDWLQV DQG WKH DJHQGD ZHUH
 GLYLGHG LQWR SDUWV VKDUHG E\ YDULRXV LQVWUXFWRUV 'D\ RI WUDLQLQJ
 FRYHUG OLEHUDWLQJ VWUXFWXUHV VFLHQFH FXUULFXOXPV DQG FKHPLFDO X
 UHGXFWRQ 'D\ FRYHUG LQWHJUDWHG SHVW PDQDJHPHQW KHDOWKLHU
 KRPHV LQWHJUDWLQJ SURJUDP FRQFHWSV LQWR WKH FXUULFXOXP XVLQJ
 OLEHUDWLQJ VWUXFWXUHV LQ WKH FODVVURRP DQG UHODWLRQVKLSV DQG
 FRPPXQLFDWLQJ 7KH WUDLQLQJ RI WKH WHDFKHUV ZDV OHG DQG GLUHFHWG E\
 LQVWUXFWRUV IURP WKUHH \$UNDQVDV LQVWLWXWLQV DQG WKUHH GHSDUWPHQW
 YDULRXV EDFNJURXQGV HQYLURQPHQWDO VFLHQFH . HGXFDWLRQ DQG
 FRPPXQLFDWLQ DQG VSHHFK

%URFKXUHV EURFKXUHV ZHUH SUHSUHG DQG JLYHQ WR WKH WHDFKHUV
 IRU WKH WUDLQLQJ %URFKXUHV DGGUHVVG WKH VSHFLILF WRSLFV RI WKH
 SURJUDP f&KHPLFDO 8VH 5HGXFWRQ g f, QWHJUDWHG 3HVW 0DQDJHPHQW
 IRU +RPHV g f/LEHUDWLQJ 6WUXFWXUHV IRU (QYLURQPHQWDO (GXFDWLQ g DQG
 f'HYHORSLQJ D 6FLHQFH 3URMHFW g %URFKXUHV ZHUH GHYHORSHG WR UHILQH
 PHVVDJHV LQ WKH IRUPDW ZH IHOW LGHDO IRU WKLV SURMHFW , Q SDUWLFXODU
 XVH RI /LEHUDWLQJ 6WUXFWXUHV IRU WKHVH HQYLURQPHQWDO HGXFDWLRQ WRS
 DQG IRU WKHLU XVH LQ WKH . FODVVURRP ZDV D QHZ WRSLF DUHD &KHPLFDO
 XVH UHGXFWRQ IRU WKH KRPH ZDV DOVR D QHZHU FRQFHWS GHYHORSHG IRU
 WKLV SURJUDP

5HVXOWV

\$ZDUHg RI WKH WRSLFV RI WKH WLP
SRVW VXUYH\ WKH DYHUDJH UHVSQRQH
TXHvwLRQV GURSSHG WR \$OO WHDF
OHYHO RQ WKH TXHvwLRQ RI f7\SHV RI S
7KH WKLUW\ ILYH WHDFKHUV WKDW DWWHQGHG UHSUHVQWHG WZHqw\ WZR
GLIIHUHQW VFKRROV DQG WDXJKW D VSHFWUXP RI JUDGHV NLQGHUJDUWHQ L H
DJH WR WKURXJK WK L H DJH WR ZLWK RI WKH WHDFKHUV
IURP JUDGHV WKURXJK FRQVLGHUHG PLGGOH VFKRRO IRU PRVW GLVWULFWV
LQ \$UNDQVDV \$OWKRXJK VRPH WHDFKHUV WDXJKW DOO VXEMHFVW PRVW
WHDFKHUV WKDW DWWHQGHG WDXJKW VFLHQFH ORVW RI WKH WHDFKHUV ZHU
IHPDOHV ZLWK WKH PDMRULW\ RYHU ILIW\ \HDUV RI DJH 7KLV
FRLQFLGHG ZLWK PDQ\ SDUWLFLSDQWV KDYLQJ PDQ\ \HDUV RI VHUYLFH DV D
WHDFKHU 7KH DYHUDJH QXPEHU RI \HDUV RI VHUYLFH ZDV IRU WHDFKHUV
WUDLQHG

3ULRU WUDLQLQJ DQG IHHOLQJV RQ WUDLQLQJ

1RQH RI WKH WKLUW\ ILYH WHDFKHUV UHSRUWHG HYHU KDYLQJ UHFHLYHG
WUDLQLQJ RQ WKH WRSLFV RI FKHPLFDO XVH UHGXFwLRQ DQG LQWHJUDWHG SH
PDQDJHPHQW RQ WKH SUH VXUYH\ ,Q DGGLWLRQ DOO WHDFKHUV RQ WKH SRVW
VXUYH\ DJUHHG RU UHSRUWHG VDWLVIDFWLRQ WKDW WKH WUDLQLQJ ZDV
LQIRUPDWLYH DQG ZRXOG EH KHOSIXO LQ WKH FODVVURRP WKDW LQVWUXFWRU
ZHUH NQRZOHGJHDEOH WKDW WKH OHYHO RI LQVWUXFWLRQ ZDV DSSURSULDWH Z
WKHLU VNLOO OHYHO DQG WKDW WKH\ ZRXOG UHFRPPHQG WKH WUDLQLQJ WR RW
WHDFKHUV LQ WKH . HGXFDWLRQDO V\VWHP

6HFWLRQ 6NLOOV SURILFLHQF\ TXHvwLRQV

7KH UHVXOWV RI WKH 3URILFLHQF\ TXHvwLRQV DUH UHSRUWHG LQ 7DEOH 2Q
DYHUDJH DFURVV DOO ILIWHHQ TXHvwLRQV WHDFKHUV VDLG WKH\ ZHUH f1RW

KRPH 7DEOH VKRZV WKH UHVXOWV DQHRQH WKH UQLPQH Z MUHD FVODHV) BORIZYQG
WKDW RQ DYHUDJH RI WKH SURGXFWV WKH DFKH UDVRQ UDQH WKRIZLUGKRRAM L
ZHUV DVIH 7KDW SHUFHQW GURSSHG ZWQOLQJ DMVRHWHSVQUDFLHQ LVRJP H3 URLRW KMRF KHF
WUDLQLQJ WHDFKHUV EHOLHYHG WKDW ZLRMKWV DQHLSVWURLGFXJGMW IWRQBRZLVCHUGW

4XHVWLRQV	3UH \$YJ 16	6WG GHY	3RVW \$YJ 16	6WG GHY
, FXUUHQWO\ EHOLHYH WKDW RI WKH FOHDQLQJ SURGXFWV , XVH LQ P\ KRPH BBBB DUH KHDOWK\ DQG VDIH				
, LQWHQG WR UHSODFH BBBB RI WKH FOHDQLQJ SURGXFWV LQ P\ KRPH ZLWKQVDIHU DQG KHDOWKLHU DOWHUQDWLYHV				
, FXUUHQWO\ EHOLHYH WKDW RI WKH SHVW FRQWURQO SURGXFWV , XVH LQ WKH KORPH BBBB DUH KHDOWK\ DQG VDIH				
, LQWHQG WR UHSODFH BBBB RI WKH SHVW FRQWURQO SURGXFWV LQ P\ KRPH ZLWK VDIHU DQG KHDOWKLHU DOWHUQDWLYHV				

7DEOH5HVXOWV IRU XVDJH TXHVWLRQV 1RWH 7KH WUDLQLQJ VHUYHG WR HGX PDQDJHPHQW DURXQG WKH KRPH L H WZR HQYLURQPHQWDO KHDOWK WRSLFV W IRU \RXQJHU FKLOGUHQ)ROORZLQJ WKH WUDLQLQJ PDQ\ WHDFKHUV LQGLFDWHHG PDQ\ RI WKH SURGXFWV LQ WKHLU RZQ KRPH ZLWK VDIHU SURGXFWV 5HSRUWHG I

'LVFXVVLRQ

F R Q F H U Q D Q G D U H Q R Z R Q O \ M X V W H P H U
D O R Q J Z L W K F R Q F H S W V R Q D J J U H J D W H
H K H P Z E W K V W R D W K H Q W H D F K X U V E R G H W K U R X
P R % D M K H G D Q Q D R K H U U H X O X W P R O D W K H Y S U H T S R
W K W D D R K H U K H B K F Y Q S K H D Q U H G W K R E V D P H I E
D W B P K H W W X F W G X U K R Z I R U H F R Q C Q H P R W V W V B A
M R U R P D P O V G H R K U G W K H V G L Y F K A P L F D Q R I F R Q P H R
H W K D Q G F R R P W F B H V X Q W F R P P K R G H G X W K H U P R W K
W K L V Q P A F G W D W R W B Q G N S Q R A Z Q H G D H W L W K L V L V
R G X F L Q J W K L V W R S L F W R . H G X F D W R U V
K H O S H O K H D Y G U H Q D W G H U W L W D Q G B R R U H G E R P L
Q Z L W K V W K H Y S R A W X P Q H W L D Q G V Y D O U X W H W Q R I F W K H
P H U V I R P D O D D F D W H H Z L Q W V P P N H Z H K R Q F H V J D A Q R
Z D Q Y Q N R V W U K P W K U P A D C H Q H O R S A X W L Q R M K H R
U H R R P F W H J R U 3 D D Q D Q K Q P K D O H X B D Q C L W K M K
B I K H W H 7 K H & H W H D F K H W H U X P W G U L Q G U F D M R H
D S U R L Q X F R M W H H H Q W O H Q Y F R Q D F W U Q H Q S U R G X
W K H H K L Z D G V H Q H D O R W D X Q D E N A L W K H P L R Q W H W A
G H R X I P G R G H S O D R F U H D A G K H O W V R W K F U H V R Q Y M K H R C
P @ \ E H Q E D O R H G N L R Q Q F X W U H Q W L H Q W M L R I F U H O D W
W R Q Z K L W F K D W K H U D M C L R M J K Q D U H S O D F H P R R W
U H D F W L E R Q H D Q G W K R S I S K U R R Q L W K H V L R V K R I H L
W K J R X J K W L Q Y R S H M V S 4 H W K R Y H V W H R P F K H H R V H F
F L O D X V H G R P R U H U R X W L Q H O \ P D \ R I I H U
F D O W M K L Q N L Q J L Q I W K H F O D V M U R R P I M H W W L

7KHUH ZHUH VRPH DUHDV ZKHUH WHD R₁ W₁ K₁ H₁ U₁ V₁ H₁ A₁ P₁ H₁ R₁ Q₁ R₁ H₁ O₁ D₁ K₁ H₁ D₁ W₁ K₁ S₁ W₁ R₁ S₁
NQRZOHGJH IRU H[DPSOH LQ WKH DUHD RI DVWKPD WULJJHUV DQG VRXUFHV RI
FDUERQ PRQR[LGH SRLVRQLQJ +RZH₁YHU PDQ\ WHDFK₁HUV VHHPHG WR EH
XQIDPL₁OLDU ZLWK WKH FRQFH₁SW RI WKH SUHFDXWLRQDU\ SULQFLSOH 7KLV LV
IRXQGDWL₁RQDO DVSHFW RI HQYLURQPHQWDO HGXFDWLRQ)RU WKH
HQYLURQPHQWDO WRSLFV RI ,30 DQG &5 PXFK XQFHUWDLQW\ H[LVWV
FRQFHUQLQJ ORQJ WHUP FKURQLF KH₁DOWK HIIHF₁WV DQG WKH SUHFDXWLRQDU\
SULQFLSOH LV KLJKO\ DSSOLFDEOH 7KHUH DOVR VHHPHG WR EH PRUH DZDUHQHV
RI WKH KH₁DOWK ULVNV RI SHVWLFLGHV WKDQ ZLWK FKHPLFDOV XVHG LQ WKH KR
DQG WKH₁U SRWHQWLDO KH₁DOWK HIIHF₁WV 7KLV ZDV H[SHFWHG DV PDQ\ FLWLJH
HVSHFLDOO\ VFLHQFH WHDFK₁HUV KDYH URXWLQHO\ KHDUG LQ WKH QHZV DERX
FRQFHUQV DQG UHJXODWLRQV IRU SHVWLFLGHV &RQFHUQV DERXW FKHPLFDOV Z
URXWLQHO\ XVH RQ RXU ERGLHV DQG LQ RXU KRPHV DUH RI PRUH UHFHQW

KWWS ZZZ DUNDQVDVHG RUJ GLYLVLRQV OHUDWUQDQGVH UMSLGBHVQEQUUZYBWDODWLDQQGLQ KRZ
LQVWUXFWLRQ IUDPHZRUVN FXUULFXOXPBFDNGHDJSRWLMVKHVFSHQFWLFH RI VFLHQWLILF DUJ
'DVNROLD'LPRV \$.DPS\OLV 3 6HFRQHGDWQ LQJHDFKHHQFH V
FRQFHSQLRQV RI FUHDWLYH WKLQNLQJ ZLWIKQOV WKH \$FGRYQDVQHFILVQ JR (QHYQWBLQRPQIRHACDVODSL VN
HGXFDWLRQ ,QWHUQDWLRQDO -RXUQDO RI (QYLURQPHQWDO DQG 6FLHQFH
(GXFDWLRQ
KWWS ZZZ OLEHUDWLQJVWUXFWXUHV FRP KRPH
KWWS ZZZ DFFXUDF\LQVSHFWLRQV FRP XR SGI
*RRGZLQ 0 &RRSRUDWLYH OHDUQLQJ DQG VRFLDO VNLOOV :KDW VNLOOV WR
WHDFK DQG KRZ WR WHDFK WKHP ,QWHUYHQWLRQ LQ 6FKRRO DQG &OLQLF